



Mayor Michael B. Coleman

City of Columbus Green Fleet Action Plan

2011-2014

2011 Year-end Update

Department of Finance and Management
Division of Fleet Management

City of Columbus
Green Fleet Action Plan
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Mayor Michael B. Coleman

Section 1: Introduction

Mayor Coleman continues to be a front-runner in the Midwest in “greening” our environment. The past several years have yielded significant accomplishments toward this end goal, including:

- City of Columbus awarded the #1 Greenest Fleet in North America by Government Fleet in 2011
- Columbus Fleet Management was awarded the “Clean Fuels Champion” statewide award by Clean Fuels Ohio in 2011
- Three Columbus divisions (Transportation, Refuse and Sewers and Drains) were certified as Ohio Green Fleets
- City of Columbus awarded the 7th “greenest” fleet in the country by Government Fleet in 2010
- Environmental Stewardship Award (2009) presented to Mayor Coleman by Government Fleet Magazine, Bobbitt Publishing for public sector fleets in the USA
- “Environmental Leadership” award received from the Ohio Environmental Council for our 2009 green fleet initiatives
- City of Columbus awarded the 22nd “greenest” fleet in the country by Government Fleet in 2009

In 2008, Mayor Coleman issued the City’s first Green Fleet Action Plan (available at www.getgreencolumbus.com). This plan addresses the management, operation and procurement of Columbus fleet vehicles in order to improve vehicle energy efficiency and reduce emissions. This was a plan for greening our city’s fleet and addressed the most pressing issues of the time, with most targets and goals going through 2010. The majority of targets of the original plan were met, including:

- Reduction of overall fuel consumption by almost 2% since the plan was implemented
- Significantly increasing our use of bio-fuels
- Implementation of our first CNG refuse truck demonstrating reduced carbon emission and fuel savings

- Retrofitting all eligible diesel vehicles with emission reduction equipment and anti-idling equipment
- Increasing our purchases of “green” vehicles

This updated plan is intended to lead us through the next phase of greening the City’s fleet and strengthening our efforts to reduce our carbon footprint. It is based on the City’s 2008 original plan and Mayor Coleman’s 2005 Green Memo. The goals of this plan remain the same – to reduce fleet petroleum use and reduce vehicle emissions, while realizing cost efficiencies when possible.

Section 2: City of Columbus Facts

- The City of Columbus Fleet Management Division maintains over 5,600 pieces of equipment
 - Approximately 3000 are on-road vehicles, i.e., cars, trucks, SUVs, etc.
 - Approximately 2600 are off-road, e.g. construction equipment
- 3,472,072 gallons of fuel consumed in 2011
 - 907,236 gallons biodiesel (72% of all bulk diesel purchased was biodiesel)
 - B5: 250,280 gallons
 - B20: 656,956 gallons
 - E-85 – 4980 gallons (<1% of total unleaded)
 - CNG – 17,205 gge (<1% of total diesel)
- 28,058,122 total miles were driven in 2011 by all city-owned vehicles
- City population of 769,360

Section 3: Metrics

Immediate/On-going Initiatives:

- **Measure:** Total annual City fuel use (includes **all** fuel used- bio, ethanol, petroleum, CNG, etc.)
 - **Target: Reduce overall City fuel use by 2% compared to 2010 usage by 2014 – on track**

Accomplish through: Working with city agencies to right-size and downsize the fleet, refine and enhance “green” procurement policies, greater promotion of the anti-idling policy, GPS and AVL telematic technologies, and long-range planning and use of vehicle replacement plan

2011 year-end update: As of year-end, overall City fuel use is down by **1.6%, or 56,380 gallons**, compared to 2010 (3,472,072 gallons consumed in 2011 vs. 3,528,452 in 2010).
- **Measure:** Total annual City petroleum use (includes **only** petroleum fuel- does not include “green” fuels - bio fuels, ethanol, CNG, etc.)

- **Target: Reduce annual petroleum use by 5% compared to 2010 levels by the end of 2014 – on track**

Accomplish through: Increased use of alternative-fueled vehicles- hybrids, CNG and flex fuel, and greater use of biodiesel

2011 year-end update: As of year-end, City petroleum use is down by **4.2%, or 146,079 gallons** compared to year-end 2010 (3,309,293 gallons of petroleum consumed in 2011 vs. 3,455,372 in 2010). This equates to a reduction of 1,299 metric tons of carbon dioxide, the equivalent of the annual greenhouse gas emissions from 255 passenger vehicles.

- **Measure:** Percentage of City bulk diesel purchases that are a biodiesel blend (at least B2 and up to B20 depending on season)

- **Target: 100% by end of 2013**

- **75% by end of 2011 – 72%, slightly below target**
- **85% by end of 2012**

Accomplish through: Cleaning of diesel tanks so that all tanks can be switched to biodiesel

2011 year-end update: In 2011, **72%** of City bulk diesel purchases were biodiesel, with B5 purchased in January, February and December and B20 purchased in the warmer months. Four Transportation fuel sites had tanks cleaned in 2011, bringing the total number of fuel sites that are 100% biodiesel to 12. All Refuse, Transportation and Fleet Management division fuel sites are now 100% biodiesel. Additional fuel tanks will continue to be cleaned and converted to biodiesel throughout 2012.

- **Measure:** Light duty vehicle purchases that are considered green

- **Target: 50% by end of 2011- exceeded**

Accomplish through: Continue to enforce “environmentally preferable purchasing” policy, continue to review all vehicle specifications in conjunction with the end user agency and the Purchasing Office to ensure the most “green” vehicles possible are being specified, continue to meet with City divisions to review purchase requests in order to right-size vehicles for their intended purpose

2011 year-end update: In 2011, the City purchased 290 light duty vehicles. Of these, 159, or **55%**, are considered green. The majority of green light duty vehicle purchases have been flex fuel.

- **Measure:** Heavy-duty truck purchases that are considered green

- **Target:** Purchase at least 22 heavy duty CNG trucks and 5 heavy duty hybrid trucks through federal grant programs - **met**

Accomplish through: Implementation of CMAQ and Clean Cities grant for 2010 funded vehicle purchases to be received in first half of 2011

2011 year-end update: In 2011, the City purchased 152 heavy duty vehicles, 89, or **59%**, of which are considered green. Of the 89 heavy-duty green purchases, **20** are CNG trucks and **5** are hybrid trucks. Two of the CNG trucks were able to be purchased by the end of 2010. Two of the CNG trucks are still on order and expected to arrive in mid-2012. One of the hybrid trucks is also still on order and expected early 2012.

- **Measure:** Create CNG fueling infrastructure
 - **Target:** Construct and open the first City-owned CNG fueling station at Groves Road by November 1, 2011 – **slightly delayed**
 - Accomplish through:** Implementation of Clean Cities grant for construction and operation of a CNG fueling station

2011 year-end update: Due to a delay in receiving CNG equipment, the opening of the CNG station is slightly behind its original schedule. The station is expected to begin pumping fuel in February, with a formal station dedication scheduled for early 2012.

Long-term Initiatives:

- Expand CNG fueling infrastructure
 - **Target:** Identify the location of the next CNG City-owed fueling station(s) and secure funding by end of 2011; begin design by end of 2nd quarter 2012
 - **2011 year-end update:** The location of the 2nd CNG station has been identified on Morse Road near Cleveland Avenue. The property is currently under review by the City's Real Estate Office. Funds for the design of the station have been budgeted in Fleet's 2012 capital budget and for construction in the 2013 budget.
- Expand numbers of CNG heavy duty vehicle fleet
 - **Target:** As fueling infrastructure grows, create strategy for increasing the number of heavy duty CNG vehicles to keep pace with infrastructure growth
- Reduction of Greenhouse Gas Emissions from City vehicles
 - **Target:** Establish baseline and reliable measurement tool to calculate GHG emissions from City-owned vehicles; establish target for GHG reduction by end of 2011
 - **2011 year-end update:** In September, three City divisions were certified as Ohio Green Fleets. Refuse, Transportation and Sewers and Drains were certified by Clean Fuels Ohio as meeting the standards for green fleets. As part of the certification process, Clean Fuels Ohio determined the emission reductions achieved by these divisions based on the various green initiatives implemented in each division. Because Ohio Green Fleets is the recognized "green" standard for Ohio public fleets, Columbus will use the

emission reductions determined by CFO as a measurement tool to calculate and report emission reductions from City-owned vehicles.

- Electric vehicle use
 - **Target:** Explore electric vehicle options and infrastructure available and viable to the City of Columbus operations; explore cost and funding opportunities
 - **2011 year-end update:** The City of Columbus has been developing an electric vehicle readiness plan with help from the *Project Get Ready* community network. The plan outlines the ideal locations for vehicle charging stations. A Department of Energy grant obtained through project partner Clean Fuels Ohio will allow the city to install two of these stations for use by the public. Additionally, the city is working to establish a partnership with American Electric Power to allow the integration of electric vehicles into the city's own fleet.
- Green Off Road Vehicles
 - **Target:** Explore available “green’ off road options such as propane mowers and electric golf carts at city-owned golf courses, etc.
 - **2011 year-end update:** Columbus Fleet Management is currently in the process of working with our Recreation and Parks and Transportation divisions to determine replacement needs for mowers and is exploring the possibility of replacing many diesel and gasoline mowers with propane powered OEM mowers. There is a possible grant opportunity through Clean Fuels Ohio for a DERG grant that would fund 80% of the cost of replacement propane mowers. As of year-end, this grant solicitation is not yet published but will be explored when released.
- Help create a green infrastructure
 - **Target:** Cooperate with other Central Ohio private and public fleets in alternative fuel procurement, in refueling station placement and in demonstrating new technologies
 - **2011 year-end update:** Columbus Fleet Management is a member of the Mayor’s Green Team, as well as the Green Transportation Committee, where we have the opportunity to confer with other Central Ohio private and public fleets. Columbus has had conversations with COTA , AT&T and Columbus Public Schools about possible collaborations around CNG including fuel procurement and station location.

Section 4: Next Steps

Achievement of these goals and targets will require the cooperation and participation of all City department and divisions. The Fleet Management Division, with support from the Mayor’s Environmental Steward’s Office, will take the lead in implementing these initiatives and will track the progress of the targets. However, each city division should be responsible for calculating and tracking its own carbon footprint. Updates will be provided at year-end and year-end that outline the activity that has taken place. The

Mayor's Green Team will be kept informed about the progress of the plan and will have the opportunity to provide input and assist in monitoring progress. We expect this document to be fluid- new technology, new grant opportunities, funding challenges, etc. are constantly happening. Every effort will be made to take advantage of the best options available to green our fleet, while minimally impacting City operations.